DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-019382
Date Inspected: 19-Jan-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	An Qing Xiang, Qiu Wen			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 14, OBG 14W (NWIT # 08220)

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SEG3020L-174
SEG3020K-026 (UT class “A” rejectable indication found)
SEG3020Q-058 (UT class “A” rejectable indication found)

During the Quality Assurance Ultrasonic Testing (UT) verification of welds located on OBG lift 14 West, this Quality Assurance (QA) Inspector discovered the following issues:

Issue 1:
-One class “A” longitudinal indication measuring approximately 20mm in length.
-The depth of the indication is 21mm from face A.

-The db rating is +4.
-The material thickness is 30mm.
-The weld is identified as: SEG3020Q-058.
-The Weld is a Complete Joint Penetration (CJP), Tee-joint, joining the Floor Beam (FB) 3320A to the Longitudinal Diaphragm (LD) 3049A at Panel point (PP) 126.
-The “Y” location of the indication is 1575mm from the top end of the weld as shown in the attached photograph.
-The indication is clearly marked on the component.
-The material is identified as Seismic Performance Critical Member (SPCM) and the weld is identified as Fracture Critical Weld (FCW).
-The member is located in Bay 14.

Issue 2:
-One class “A” longitudinal indication measuring approximately 20mm in length.
-The depth of the indication is 23mm from face A.
-The db rating is +6.
-The material thickness is 25mm.
-The weld is identified as: SEG3020K-026.
-The Weld is a Complete Joint Penetration (CJP), Tee-joint, joining the Floor Beam Sub Assembly SA3410A to the Bottom Plate (BP) 3092A at Panel point (PP) 127.3.
-The “Y” location of the indication is 450mm from the Longitudinal Diaphragm (LD) 3050A as shown in the attached photograph.
-The indication is clearly marked on the component.
-The material is identified as Seismic Performance Critical Member (SPCM) and the weld is identified as Fracture Critical Weld (FCW).
-The member is located in Bay 14.

The Notice of Witness Inspection Number (NWIT) is 08220. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC’s QC personnel are required to perform 100% UT inspection of these welds. Attached photographs provide additional location details.

This issue has an incident report.

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

OBG Seg 13CW

The Submerged Arc Welding (SAW) process on weld joint no: SEG3014-006 [Deck Panel (DP) 3132A to DP3133A, complete joint penetration (CJP) weld]. The welder is identified as 250050 and was observed welding in the 1G position. ZPMC QC was identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with WPS: B-T-223(2)1T-ESAB-1.

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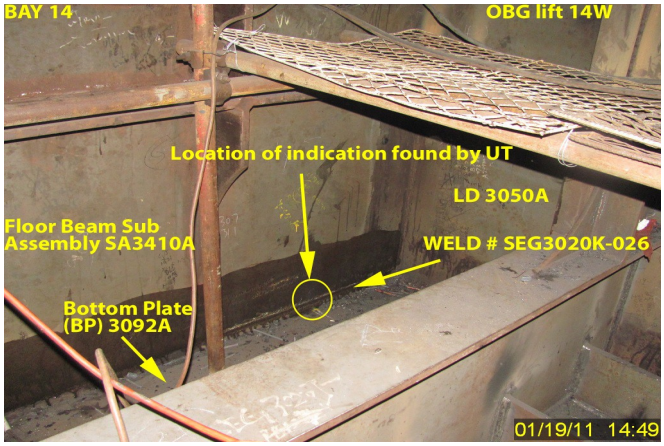
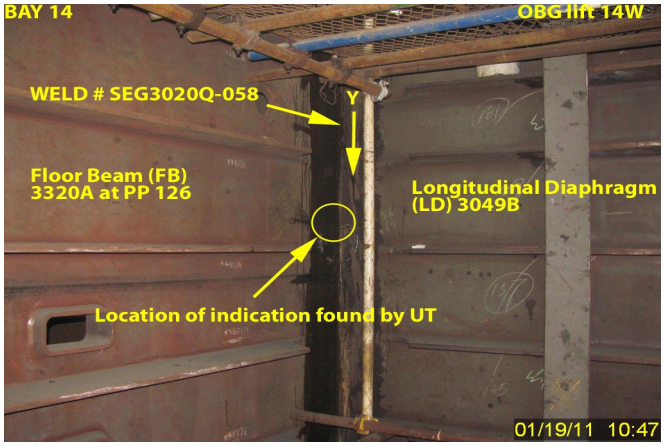
OBG Seg 13AW:

Repair welding of weld joint no: SEG3013P-137 [Longitudinal Diaphragm (LD) 3034A to I-rib on Floor beam (FB) 3187A, complete joint penetration (CJP) weld at panel point (PP) 119]. The welder is identified as 066262 and was observed welding in the 4G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Liu Feng. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-4G(4F)-FCM-Repair. Repair welding was done as per Welding Repair Report (WRR): B-WR 19842 Rev-0.

Repair welding of weld joint no: SEG3013AP-072 (FB3186A to LD3031A, CJP weld at PP119-1500). The welder is identified as 045221 and was observed welding in the 1G position. Welding process was identified as SMAW. ZPMC QC was identified as Mr. Liu Feng. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-1G(1F)-FCM-Repair. Repair welding was done as per WRR: B-WR 19847 Rev-0.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer